



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
SOUTHEAST REGIONAL OFFICE  
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Commissioner

June 12, 2007

Board of Selectmen  
Town Hall  
600 Chief Justice Cushing Way  
Scituate, MA 02066

**RE: SCITUATE – BRP/WMA**  
Scituate Water Division  
PWS ID #4264000  
Water Management Act  
Permit #9P4421264.02  
Transmittal #W076216

Dear Sirs,

Attached please find:

- Findings of Fact in Support of Permit #9P4421264.02, and
- WMA Permit #9P4421264.02 for the Scituate Water Division.

The signature on this cover letter indicates formal issuance of the attached document.

If you have any questions regarding this information, please contact Leslie O'Shea at (508) 946-2837 or via e-mail at [leslie.o'shea@state.ma.us](mailto:leslie.o'shea@state.ma.us).

Very truly yours,

This final document copy is being provided to you electronically by the  
Department of Environmental Protection. A signed copy of this document  
is on file at the DEP office listed on the letterhead.

Richard J. Rondeau, Chief  
Drinking Water Program  
Bureau of Resource Protection

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ecc: Duane LeVangie, MassDEP  
Margret Kearns, Riverways Program  
Eugene Babin, Town of Scituate

Jeffrey Rosen, Scituate Water Study Committee  
Lance Van Lenten, Scituate Water Study Committee  
Samantha Woods, NSRWA

cc: Anthony Antonello, Town of Scituate

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD Service - 1-800-298-2207.

DEP on the World Wide Web: <http://www.mass.gov/dep>



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**Communication for Non-English Speaking Parties (310 CMR 1.03(5)(a))**

**English**

This document is important and should be translated immediately.

**Spanish**

*Este documento es importante y se debe traducir inmediatamente.*

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*Este original é importante e deve ser traduzido imediatamente.*

**Italian**

*Questo documento è importante e dovrebbe essere tradotto immediatamente.*

**Greek**

Αυτό το έγγραφο είναι σημαντικό και πρέπει να μεταφραστεί αμέσως.

**French**

*Ce document est important et devrait être traduit immédiatement.*

**Chinese (traditional)**

這個文件重要和應該立刻被翻譯。  
这个文件重要和应该立刻被翻译。

**Findings of Fact in Support of Permit Issuance  
Water Management Permit # 9P4421264.02**

The Department of Environmental Protection (the Department) hereby issues the Town of Scituate (Scituate) a permit to withdraw water in accordance with the Water Management Act, Massachusetts General Law (MGL) Chapter 21G.

This permit supersedes the previous WMA Permit #9P4421264.02 issued to Scituate on May 7, 2002.

**FINDINGS OF FACT**

As required by MGL Chapter 21G, §11 and 310 CMR 36.00, the Department makes the following Findings of Fact in support of the Town of Scituate's permit and includes herewith its reasons for approving the permit and for imposing the conditions of approval.

The Water Management Act requires the Department to issue permits that balance a variety of factors including:

- Reasonable protection of existing water uses, land values, investments and enterprises;
- Reasonable conservation consistent with efficient water use;
- Reasonable protection of public drinking water supplies, water quality, wastewater treatment capacity, waste assimilation capacity, groundwater recharge areas, navigation, hydropower resources, water-based recreation, wetland habitat, fish and wildlife, agriculture, flood plains; and
- Reasonable economic development and job creation.

To achieve the balance of competing water uses mandated by the Act, the Department has adopted the *Water Management Policy For Permit and Permit Amendment Applications and 5-Year Reviews*, Effective Date: April 2, 2004 (the Policy) and the *Guidance Document for Water Management Act Permitting Policy*, Effective Date: January 17, 2006 (Guidance), which can be found at:

<http://www.mass.gov/dep/water/laws/policies.htm#wmgt>.

The Policy and Guidance identify the Performance Standards to be applied to new Water Management permits, and existing permits at the time they are modified or amended.

In applying the Performance Standards the Department relies upon the determinations of relative stress established in the Massachusetts Water Resources Commission (WRC) report, *Stressed Basins in Massachusetts* (approved December 13, 2001). The Department also reviews other available research, including reports by the United States Geological Society (USGS), the Department's Water Quality Assessment Reports and other pertinent reports available for specific river basins.

Scituate's sources are located in the portion of the South Coastal Basin which is unassessed.

The map of stressed basins can be reviewed at:

<http://www.mass.gov/dep/water/laws/policies.htm#wmgt>

The Performance Standards for unassessed basins are:

1. Residential gallons per capita day water use (RGPCD) of 80 gallons or less;
2. Unaccounted-for water (UAW) of 15% or less.

The Department believes these standards are reasonable based on studies and data developed throughout the country, the 1996 AWWA Leak Detection and Water Accountability Committee report on water accountability (AWWA Journal; July 1996; pp. 108-111), and the fact that the 2005 average values for Massachusetts Public Water Suppliers were 71 RGPCD, and 11% UAW. Further, the Department believes that through effective water conservation and implementation of the WMA Permit conditions, Permittees may be able to reduce RGPCD below 80 gpd and UAW below 15%.

The Guidance provides implementation and enforcement guidelines, including:

- timelines for compliance with the Performance Standards;
- procedures and requirements for Permittees who fail to comply with the Performance Standards within those timelines.

The Town of Scituate submitted a BRP WM03 permit application requesting an increase in authorized volume. The withdrawal volume authorized by the 2002 WMA Permit was based on an interim Water Needs Forecast (a.k.a. demand projection) for the Town of Scituate. On November 9, 2006, the Massachusetts Water Resources Commission (WRC) approved a new Water Needs Forecast which included volumes for Scituate with and without Humarock. At this time, water for the Humarock area is purchased from the Town of Marshfield. Scituate may decide to connect Humarock to its own water system, if this is determined to be the most cost effective way to supply Humarock with water. Scituate's permit application requested to increase the WMA authorized volume from 1.73 MGD to 1.85 MGD (or 675.25 MGY) without Humarock. Should Scituate decide to connect Humarock before the permit end date of August 31, 2010, it was requested to increase the authorized volume to 2.01 MGD (or 733.65 MGY).

The Department has completed the review of the permit application and, in conjunction, the 5-Year compliance review of Scituate's existing permit in the South Coastal Basin. Scituate's WMA permit has been conditioned to reflect the increase in authorized volume, as well as the standards of the WMA policy.

Scituate's WMA Permit has also been conditioned to require continued facilitation and participation in the work of the Scituate Water Study Committee and First Herring Brook Watershed Initiative to explore the development of minimum flow targets for fish passage at Old Oaken Bucket Pond and Tack Factory Pond (see Special Condition 6). During the public comment period for the permit application, the Department received letters from the Town of Scituate, the North and South Rivers Watershed Association and the Massachusetts Riverways Program regarding the restoration of the herring run in the Old Oaken Bucket Pond system. On April 13, 2007, the Scituate Water Study Committee and the Riverways Program convened a workshop for the Town, environmental agencies, watershed groups, etc. to discuss a preliminary plan of action for developing the minimum flow targets. As a result of this workshop, a habitat assessment will be conducted during the summer of 2007 to ensure that the habitat of the Old Oaken Bucket Pond system is suitable for restoration of the herring run. A second workshop is tentatively scheduled for November 2007.

Although Scituate has conducted its own analysis of the firm yield of Old Oaken Bucket Pond, work done by Department and USGS (United States Geological Survey) will be used to study the impacts of releases from the reservoir system under varying conditions and during certain times of the year. Department hydrologists will be running the *Firm Yield Estimator* (a software tool for use in estimating the firm yield of Massachusetts surface water reservoir systems) using the minimum flow targets developed by the study group. In addition, the Department is recommending that the Old Oaken Bucket Pond system be included as one of the reservoir systems to be studied and modeled by USGS under the Firm Yield III project.

For more information about the *Firm Yield Estimator* please go to:

<http://www.mass.gov/dep/water/resources/firmyild.htm>

At this time, Special Condition 6 requires the Town of Scituate to continue to facilitate and participate in the work of its Water Study Committee and First Herring Brook Watershed Initiative, and submit annual reports of any actions taken. Following review of the habitat assessment and the firm yield work, this permit may be modified to require a management plan for First Herring Brook and require minimum streamflow releases.

The Department circulated a draft of this permit on May 8, 2007 for a three week public comment period. No comments were received regarding the draft permit.

### Findings of Fact for Specific Permit Conditions

**Special Conditions 1, Authorized Withdrawal Volumes:** as noted above, Scituate has requested to increase the WMA authorized volume from 1.73 MGD (631.45 MGY) to 1.85 MGD (or 675.25 MGY) without Humarock, and from 1.73 MGD to 2.01 (or 733.65 MGY) with Humarock. This requested increase is based on the water needs forecast approved by the WRC on November 9, 2006.

This permitted volume is in addition to Scituate's Registered volume of 1.49 MGD. Scituate's registered volume is based on the Town's historic water use from 1981 through 1985.

Summary of Scituate's WMA Authorizations		
WMA Authorization	Volume Authorized	
WMA Registration #421264.01	1.49 MGD (543.85 MGY)	
	<b>Without Humarock</b>	<b>With Humarock</b>
WMA Permit #9P4421264.02	0.36 MGD (131.40 MGY)	0.52 MGD (189.80 MGY)
<b>Total WMA Authorization</b>	<b>Without Humarock</b>	<b>With Humarock</b>
	1.85 MGD (675.25 MGY)	2.01 MGD (733.65 MGY)

In 2006, Scituate's average daily withdrawal from the South Coastal Basin was 1.63 MGD.

NOTE: Scituate will be required to file an application for a BRP WS 32 Permit, Distribution Modifications for Systems that serve more than 3,300 people, and receive approval from the Department prior to connecting Humarock to the current distribution system.

**Special Condition 2, Maximum Daily Withdrawal Rates from the Authorized Groundwater Withdrawal Points in the South Coastal Basin:** reflect the approved Zone II rates for each of Scituate's permitted wells in the basin. Withdrawals in excess of these maximum daily rates require approval from the Department.

**Special Condition 3, Maximum Daily and Annual Withdrawal Requirements for the Authorized Surface Water Withdrawal Point in the South Coastal Basin:** based on the study completed by the Town of Scituate, the firm yield of Old Oaken Bucket Pond has been determined to be an annual daily average of 0.79 MGD, or a maximum yearly withdrawal of 288.35 MG.

The maximum daily withdrawal from Old Oaken Bucket Pond shall not exceed 3.0 MGD without specific advance written approval from the Department. The maximum daily withdrawal limit is based on the capacity of the intake structure at Old Oaken Bucket Pond.

No further firm yield work is required from the Town of Scituate. As noted above, the Department is recommending that the Old Oaken Bucket Pond system be included as one of the reservoir systems to be studied and modeled by USGS under the Firm Yield III project, and Department hydrologists will also be running the *Firm Yield Estimator* on the Old Oaken Bucket system.

**Special Condition 4, Zone of Contribution Delineations:** notes the Department's approval of Scituate's Zone II delineations; no additional delineation work is required as a condition of this permit.

**Special Condition 5, Wellhead and Surface Water Protection:** by January 1, 2009, Scituate must implement municipal controls that comply with both the Wellhead Protection Regulations, 310 CMR 22.21(2), and the Surface Water Supply Protection Regulations, 310 CMR 22.20B.

Scituate has a surface water protection plan that has been approved by the Department.

**Special Condition 6, Development of Minimum Streamflow Targets for Fish Passage at First Herring Brook:** as noted above, Special Condition 6 requires Scituate to continue to facilitate and participate in the work of the Scituate Water Study Committee and First Herring Brook Watershed Initiative, and submit annual reports of any actions taken. Following review of the habitat assessment and the firm yield work, this permit may be modified to require a management plan for First Herring Brook and require minimum streamflow releases.

**Special Condition 7, Performance Standard for Residential Gallons Per Capita Day Water Use:** as noted above, Scituate's standard for RGPCD is 80 gpd (gallons per day) or less. The Town of Scituate reported an RGPCD of 61.7 gpd for the year ending 2006.

**Special Condition 8, Performance Standard for Unaccounted for Water:** as noted above, Scituate's standard for UAW is 15% or less. The Town of Scituate reported an UAW of 10% for year ending 2006.

**Special Condition 9, Water Conservation Requirements:** incorporates the Water Conservation Standards for the Commonwealth of Massachusetts approved by the WRC in July 2006.

**Special Condition 10, Reporting Requirements:** ensures that the information necessary to evaluate compliance with the permit conditions is accurately reported.

This condition also requires that Scituate install separate meters for Wells #10 and #11 by January 1, 2009.

**Special Condition 11, General Permit Conditions:** outlines the general conditions applicable to all WMA Permittees.

The Department's Findings of Fact and summary of Permit Conditions are not intended to, and should not be construed as, modifying any of the Permit conditions. In the event of any conflict or ambiguity between the Findings of Fact and the Permit, the Permit language shall control.

**WATER WITHDRAWAL PERMIT**  
**MGL c 21G**

This permit is approved pursuant to the Massachusetts Water Management Act (WMA) for the sole purpose of authorizing the withdrawal of a volume of water as stated below and subject to the following special and general conditions. This permit conveys no right in or to any property beyond the right to withdraw the volume of water for which it is issued.

**PERMIT NUMBER:** 9P4421264.02 **RIVER BASIN:** South Coastal

**PERMITTEE:** Town of Scituate  
Board of Selectmen  
Town Hall  
600 Chief Justice Cushing Way  
Scituate, MA 02066

**EFFECTIVE DATE:** June 12, 2007

**EXPIRATION DATE:** August 31, 2010

\*This Permit supersedes WMA Permit #9P4421264.02 issued to the Town of Scituate on May 7, 2002.

**TYPE AND NUMBER OF WITHDRAWAL POINTS:** Groundwater: 6  
Surface Water: 1

**USE:** Public Water Supply

**DAYS OF OPERATION:** 365

**AUTHORIZED WITHDRAWAL POINTS:**

<b>Table 1: Withdrawal Point Identification</b>	
<b>Source</b>	<b>Source Code</b>
Old Oaken Bucket Pond	4264000-01S
Well #10, Websters Meadow	4264000-01G
Well #11, Websters Meadow	4264000-02G
Well #17A, Stearns Meadow	4264000-03G
Well #19, Edison Station	4264000-05G
Well #22, Barnes Meadow	4264000-11G
Well #18B, Boston Sand	4264000-12G

**SPECIAL CONDITIONS – PERMIT #9P4421264.02**

**1. Authorized Annual Average Withdrawal Volume from the South Coastal Basin**

This permit authorizes the Town of Scituate to withdraw water from the South Coastal Basin at the rate described in Table 2A and Table 2B below. The volume reflected by this rate is in addition to the 1.49 MGD previously authorized to the Town of Scituate under WMA Registration #421264.01 for withdrawal from the South Coastal Basin. The permitted volume is expressed both as an average daily withdrawal rate (million gallons per day or MGD), and as a total annual withdrawal volume (million gallons per year or MGY) for each five-year period of the permit term.

The Department of Environmental Protection (Department) will use the raw water withdrawal volume from all authorized withdrawal points to assess compliance with the registered and permitted withdrawal volumes.

<b>Table 2A: Authorized Withdrawal Volumes - Without Humarock – South Coastal Basin</b>					
<b>5-Year Periods</b>		<b>Total Raw Water Withdrawal Volumes</b>			
		<b>Permit</b>		<b>Permit + Registration</b>	
		Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
Period Three Years 11-12	8/31/2000 to 5/7/2002	NO PERMIT			
Period Three Years 12-15	5/7/2002 to 8/31/2005	0.24	87.60	1.73	631.45
Period Four Year 16-17	9/1/2005 to 6/11/2007	0.24	87.60	1.73	631.45
Period Four Years 17-20	6/12/2007 to 8/31/2010	0.36	131.40	1.85*	675.25*

Should Scituate connect the Humarock area of Town to the water system, the following withdrawal volume is authorized by this permit. Until such time as Humarock is connected to the water system, Scituate is limited to the withdrawal volumes listed in Table 2A above.

<b>Table 2B: Authorized Withdrawal Volumes - With Humarock – South Coastal Basin</b>					
<b>5-Year Periods</b>		<b>Total Raw Water Withdrawal Volumes</b>			
		<b>Permit</b>		<b>Permit + Registration</b>	
		Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
Period Four Years 17-20	6/12/2007 to 8/31/2010	0.52	189.80	2.01*	733.65*

NOTE: Scituate will be required to file an application for a BRP WS 32 Permit, Distribution Modifications for Systems that serve more than 3,300 people, and receive approval from the Department prior to connecting Humarock to the current distribution system.

\* Volume noted is in effect only if no change to registered volume occurs after the January 1, 2008 date of expiration of all WMA Registrations.



## **2. Maximum Daily Withdrawal Rates from the Authorized Groundwater Withdrawal Points in the South Coastal Basin**

Withdrawals from the Town of Scituate's permitted groundwater sources in the South Coastal Basin are not to exceed the approved maximum daily rates listed in Table 3 below without advance approval from the Department.

<b>Table 3: Maximum Daily Withdrawal Rates from the Authorized Groundwater Withdrawal Points</b>	
<b>Source</b>	<b>Maximum Daily Rate</b>
Well #10, Websters Meadow, 4264000-01G	0.20 MGD (138 gpm)
Well #11, Websters Meadow, 4264000-02G	0.12 MGD (81 gpm)
Well #17A, Stearns Meadow, 4264000-03G	0.39 MGD (270 gpm)
Well #19, Edison Station, 4264000-05G	0.41 MGD (288 gpm)
Well #22, Barnes Meadow, 4264000-11G	0.50 MGD (350 gpm)
Well #18B, Boston Sand, 4264000-12G	0.22 MGD (153 gpm)

## **3. Maximum Daily and Annual Withdrawal Requirements for the Authorized Surface Water Withdrawal Point in the South Coastal Basin**

### **3.1 Authorized Maximum Daily Withdrawal Requirement for Old Oaken Bucket Pond**

The maximum daily withdrawal from Old Oaken Bucket Pond shall not exceed 3.0 MGD without specific advance written approval from the Department

### **3.2 Firm Yield Calculation for Old Oaken Bucket Pond**

Based on the study conducted by the Town of Scituate, and approved by the Department, the firm yield of Old Oaken Bucket Pond has been determined to be an annual daily average of 0.79 MGD, or a maximum yearly withdrawal of 288.35 MG. No further firm yield work is required from the Town of Scituate. The maximum yearly withdrawal from Old Oaken Bucket Pond shall not exceed 288.35 MG.

## **4. Zone II Delineation**

Department records show that all of the Town of Scituate's sources have approved Zone II delineations, therefore, no further Zone II work is required.

## **5. Wellhead and Surface Water Protection**

By January 1, 2009, Scituate must implement municipal controls that comply with both the Wellhead Protection Regulations, 310 CMR 22.21(2), and the Surface Water Supply Protection Regulations, 310 CMR 22.20B.

## **6. Development of Minimum Streamflow Targets for Fish Passage at First Herring Brook**

Scituate shall continue to facilitate and participate in the work of the Scituate Water Study Committee and First Herring Brook Watershed Initiative to explore the development of minimum flow targets for fish passage at Old Oaken Bucket Pond and Tack Factory Pond. Each year, Scituate shall provide a detailed report of actions taken during the previous year; this annual report shall be submitted with Scituate's Annual Statistical Report (ASR). The report for 2007 shall contain, at a minimum, the results of the habitat assessment to be conducted during the summer of 2007, as well as a summary of the meetings convened during 2007 to discuss the plan of action for First Herring Brook.

## **7. Performance Standard for Residential Gallons Per Capita Day Water Use**

The Town of Scituate's performance standard for residential gallons per capita day (RGPCD) is 80 gallons or less. Scituate shall be in compliance with this performance standard by December 31, 2009.

Scituate's RGPCD shall be reported in its Annual Statistical Report (ASR), along with the calculation used to derive the RGPCD, the source of the data used to establish the service population and the year in which this data was developed.

Appendix A provides the additional requirements if the Performance Standard for RGPCD is not met in any year.

## **8. Performance Standard for Unaccounted for Water**

The Town of Scituate's Performance Standard for Unaccounted for Water (UAW) is 15% or less of overall water withdrawal. Scituate shall be in compliance with this performance standard by December 31, 2009.

Scituate's UAW shall be reported in its Annual Statistical Report (ASR), along with the calculation used to derive the UAW.

Appendix B provides the additional requirements if the Performance Standard for UAW is not met in any year.

## **9. Water Conservation Requirements**

At a minimum, Scituate shall implement the following conservation measures forthwith and shall be in compliance with these measures on or before the end date of this permit, August 31, 2010. The Department recognizes that the Town of Scituate is currently implementing a number of these requirements. Compliance with the water conservation requirements shall be reported to the Department upon request, unless otherwise noted below.

**Table 5: Minimum Water Conservation Requirements**

***Leak Detection***

1. Provided UAW is 15% or less, Scituate shall conduct leak detection of the entire system every three years at a minimum.
2. The Town of Scituate shall conduct leak detection of the entire distribution system within one year whenever the percentage of UAW increases by 5% or more (for example an increase from 3% to 8%) over the percentage reported on the ASR for the prior calendar year. Within 60 days of completing the leak detection survey, Scituate shall submit to the Department a report detailing the survey, any leaks uncovered as a result of the survey or otherwise, dates of repair and the estimated water savings as a result of the repairs.
3. Scituate shall conduct field surveys for leaks and repair programs in accordance with the AWWA Manual 36.
4. The Town of Scituate shall have repair reports available for inspection by the Department. Scituate shall establish a schedule for repairing leaks that is at least as stringent as the following:
  - Leaks of 3 gallons per minute or more shall be repaired within 3 months of detection.
  - Leaks of less than 3 gallons per minute at hydrants and appurtenances shall be repaired as soon as possible.
  - Leaks of less than 3 gallons per minute shall be repaired in a timely manner, but in no event more than 6 months from detection, except that leaks in freeway, arterial or collector roadways shall be repaired when other roadwork is being performed on the roadway.

Leaks shall be repaired in accordance with Scituate's priority schedule including leaks up to the property line, curb stop or service meter, as applicable. Scituate shall have water use regulations in place that require property owners to expeditiously repair leaks on their property.

***Metering***

1. The Town of Scituate shall calibrate all source and finished water meters at least annually and report date of calibration on the ASR.
2. Scituate reports its system is 100% metered. All water distribution system users shall have properly sized service lines and meters that meet AWWA calibration and accuracy performance standards as set forth in AWWA Manual M6 – Water Meters, by the permit end date of August 31, 2010.
3. The Town of Scituate shall have an ongoing program to inspect individual service meters to ensure that all service meters accurately measure the volume of water used by your customers. The metering program shall include regular meter maintenance, including testing, calibration, repair, replacement and checks for tampering to identify and correct illegal connections. The plan shall continue to include placement of sufficient funds in Scituate's annual water budget to calibrate, repair, or replace meters as necessary.

**Table 5: Minimum Water Conservation Requirements**

<b><i>Pricing</i></b>
1. The Town of Scituate shall maintain a water pricing structure that includes the full cost of operating the water supply system. Scituate shall evaluate rates at a minimum every three to five years and adjust costs as needed. Full cost pricing factors all costs - operations, maintenance, capital, and indirect costs (environmental impacts, watershed protection) - into prices.
2. The Town of Scituate shall not use decreasing block rates. Decreasing block rates which charge lower prices as water use increases during the billing period, are not allowed by M.G.L. Chapter 40 Section 39L.
<b><i>Residential and Public Sector Conservation</i></b>
1. The Town of Scituate shall meet the standards set forth in the Federal Energy Policy Act, 1992 and the Massachusetts Plumbing Code.
2. Scituate shall meter or estimate water used by contractors using fire hydrants for pipe flushing and construction.
3. Scituate has reported that all municipally owned public buildings have been retrofitted with water saving devices (faucet aerators, low flow shower heads and low flow toilets). Scituate shall continue to ensure that water savings devices are installed in all municipal buildings
<b><i>Industrial and Commercial Water Conservation</i></b>
1. The Town of Scituate shall review the use records for its industrial, commercial and institutional water users and develop an inventory of the largest water users. Scituate shall develop and implement an outreach program designed to inform and (where appropriate) work with its largest industrial, commercial and institutional water users on ways to reduce their water use by the permit end date of August 31, 2010. Such outreach plans can include, but are not limited to: information on water audits, meter sizing, water reuse, low-flow plumbing fixtures, mandatory outdoor water use restrictions, suggestions for contacting trade associations for process specific information on water use reductions, and information on contacting the Executive Office of Environmental Affairs Office of Technical Assistance for Toxics Use Reduction (OTA). OTA offers a range of assistance and information to help facilities improve water use efficiency and reduce wastewater discharge. OTA can be contacted at (617) 626-1060 or at <a href="http://www.mass.gov/envir/ota">www.mass.gov/envir/ota</a> .
2. Upon request by the Department, Scituate shall report on industrial, commercial and institutional water conservation including the results of its review of water use records for industrial, commercial and institutional water users, the inventory of the largest water users, copies of any outreach materials distributed to industrial, commercial and institutional water users, and to the extent practical, a summary of water use reductions or savings that have resulted. Upon receipt of this report, the Department will take whatever action it deems appropriate to promote the interests of the Water Management Act, including without limitation requiring the Town of Scituate to take additional actions to reduce industrial, commercial and institutional water use.
<b><i>Lawn and Landscape</i></b>
1. Scituate shall continue to implement and enforce its water use bylaw to implement outside water use restrictions as necessary.

**Table 5: Minimum Water Conservation Requirements**

***Public Education and Outreach***

1. The Town of Scituate shall develop and implement a Water Conservation Education Plan designed to educate the Town's water customers on ways to conserve water. Without limitation, Scituate's plan may include the following actions:
  - Include in bill stuffers and/or bills, a work sheet to enable customers to track water use and conservation efforts and estimate the dollar savings;
  - Public space advertising/media stories on successes (and failures);
  - Conservation information centers perhaps run jointly with electric or gas company;
  - Speakers for community organizations;
  - Public service announcements; radio/T.V./audio-visual presentations;
  - Joint advertising with hardware stores to promote conservation devices;
  - Use of civic and professional organization resources;
  - Special events such as Conservation Fairs;
  - Develop materials that are targeted to schools with media that appeals to children, including materials on water resource projects and field trips; and
  - Provide multilingual materials as needed.
2. Upon request of the Department, the Town of Scituate shall report on its public education and outreach effort, including a summary of activities developed for specific target audiences, any events or activities sponsored to promote water conservation and copies of written materials.

**10. Reporting Requirements**

The Town of Scituate shall report annually on its ASR the raw water volumes and finished water volumes for the entire water system and the raw water volumes for individual water withdrawal points.

By January 1, 2009, Scituate shall have installed separate meters for Wells #10 and #11.

**11. General Permit Conditions (applicable to all Permittees)**

No withdrawal in excess of 100,000 gallons per day over the registered volume (if any) shall be made following the expiration of this permit, unless before that date the Department has received a renewal permit application pursuant to 310 CMR 36.00.

1. **Duty to Comply** The Permittee shall comply at all times with the terms and conditions of this permit, the Act and all applicable State and Federal statutes and regulations.
2. **Operation and Maintenance** The Permittee shall at all times properly operate and maintain all facilities and equipment installed or used to withdraw up to the authorized volume so as not to impair the purposes and interests of the Act.
3. **Entry and Inspections** The Permittee or the Permittee's agent shall allow personnel or authorized agents or employees of the Department to enter and examine any property for the purpose of determining compliance with this permit, the Act or the regulations published pursuant thereto, upon presentation of proper identification and an oral statement of purpose.

4. **Water Emergency** Withdrawal volumes authorized by this permit are subject to restriction in any water emergency declared by the Department pursuant to MGL c 21G ss 15-17, MGL c 150 ss 111, or any other enabling authority.
5. **Transfer of Permits** This permit shall not be transferred in whole or in part unless and until the Department approves such transfer in writing, pursuant to a transfer application on forms provided by the Department requesting such approval and received by the Department at least thirty (30) days before the effective date of the proposed transfer. No transfer application shall be deemed filed unless it is accompanied by the applicable transfer fee established by 310 CMR 36.37.
6. **Duty to Report** The Permittee shall submit annually, on a form provided by the Department, a certified statement of the withdrawal. Such report is to be received by the Department by the date specified by the Department. Such report must be mailed or hand delivered to the address specified on the report form.
7. **Duty to Maintain Records** The Permittee shall be responsible for maintaining withdrawal records as specified by this permit.
8. **Metering** Withdrawal points shall be metered. Meters shall be calibrated annually. Meter shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.

#### **APPEAL RIGHTS AND TIME LIMITS**

This permit is a decision of the Department. Any person aggrieved by this decision may request an adjudicatory hearing. Any such request must be made in writing, by certified mail and received by the Department within twenty-one (21) days of the date of receipt of this permit.

No request for an appeal of this permit shall be validly filed unless a copy of the request is sent by certified mail, or delivered by hand to the local water resources management official in the community in which the withdrawal point is located; and for any person appealing this decision, who is not the applicant, unless such person notifies the permit applicant of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to the Department.

#### **CONTENTS OF HEARING REQUEST**

310 CMR 1.01(6)(b) requires the request to include a clear and concise statement of the facts which are the grounds for the request and the relief sought. In addition, the request must include a statement of the reasons why the decision of the Department is not consistent with applicable rules and regulations, and for any person appealing this decision who is not the applicant, a clear and concise statement of how that person is aggrieved by the issuance of his permit.

#### **FILING FEE AND ADDRESS**

The hearing request, together with a valid check, payable to the Commonwealth of Massachusetts in the amount of \$100 must be mailed to:

Commonwealth of Massachusetts  
Department of Environmental Protection  
P.O. Box 4062  
Boston, Ma. 02211

The request shall be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

**EXEMPTIONS**

The filing fee is not required if the appellant is a municipality (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority.

**WAIVER**

The Department may waive the adjudicatory hearing filing fee for any person who demonstrates to the satisfaction of the Department that the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request, an affidavit setting forth the facts which support the claim of undue hardship.

## **Appendix A – Residential Gallons Per Capita Day**

### **I. RGPCD Compliance Plan Requirement**

If Scituate fails to document compliance with the RGPCD performance standard in its 2009 ASR, or in any ASR thereafter, then the Town of Scituate must file with that ASR a Residential Gallons Per Capita Day Compliance Plan (RGPCD Plan) which shall:

1. meet the requirement set forth below in Section II;
2. include measures to be implemented to meet the performance standard, and
3. include the schedule for implementing such measures.

The filing of a RGPCD plan shall not constitute a return to compliance, nor shall it affect the Department's authority to take action in response to Scituate's failure to meet the performance standard.

If a RGPCD plan is required, Scituate must:

1. submit information and supporting documentation sufficient to demonstrate compliance with its RGPCD plan annually at the time it files its ASR, and
2. continue to implement the RGPCD plan until it complies with the performance standard and such compliance is documented in Scituate's ASR for the calendar year in which the standard is met.

### **II. Contents of a Residential Gallons Per Capita Day Compliance Plan**

At a minimum, all RGPCD compliance plans must include a detailed:

1. description of the actions taken during the prior calendar year to meet the performance standard;
2. analysis of the cause of the failure to meet the performance standard;
3. description and schedule of the actions that will be taken to meet the performance standard, and
4. analysis of how the actions described in c. will address the specific circumstances that resulted in the failure to meet the performance standard.

RGPCD plans may be amended to revise the actions that will be taken to meet the performance standard. Amended RGPCD plans must include the information set forth in paragraph above.

At a minimum, all RGPCD plans for failure to meet the RGPCD performance standard must include implementation of at least one of the following residential conservation programs:

1. a program that provides water saving devices such as faucet aerators and low flow shower heads at cost;
2. a program that provides rebates or other incentives for the purchase of low water use appliances (washing machines, dishwashers, and toilets), or
3. the adoption and enforcement of an ordinance, bylaw or regulation to require the installation of moisture sensors or similar climate related control technology on all automatic irrigation systems.

If the Town of Scituate is already implementing one or more of these programs, it must include in its RGPCD plan the continued implementation of such program(s), as well as implementation of at least one additional program. All programs must include a public information component designed to inform customers of the program and to encourage participation in the program.



Without limitation, RGPCD plans for failure to meet the RGPCD performance standard may include the following actions in addition to those outlined in the paragraph above:

1. the use of an increasing block water rate or a seasonal water rate structure as a tool to encourage water conservation;
2. a program that provides rebates or other incentives for the installation of moisture sensors or similar climate related control technology on automatic irrigation systems;
3. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction include water saving devices and low water use appliances;
4. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction minimize lawn area and/or irrigated lawn area, maximize the use of drought resistant landscaping, and maximize the use of top soil with a high water retention rate;
5. the implementation of a program to encourage the use of cisterns or rain barrels for outside watering, and
6. the implementation of monthly or quarterly billing.

## **Appendix B – Unaccounted for Water**

Unaccounted-for Water (UAW) is defined as the residual resulting from the total amount of water supplied to a distribution system as measured by master meters, minus the sum of all amounts of water measured by consumption meters in the distribution systems, and minus confidently estimated and documented amounts used for certain necessary purposes.

Examples of UAW include, but are not limited to: leakage, meter inaccuracies (unless they fall under the category of adjustment per results of source meter calibration described in the ASR), errors in estimation of stopped meters, unauthorized hydrant openings, illegal connections, data processing errors, and undocumented fire fighting uses.

Examples of uses that can be confidently estimated and documented in writing include storage tank overflow and drainage; water main flushing and flow testing; fire fighting; bleeding or blow-offs; sewer and stormwater system flushing; and cleaning and street cleaning. Generally, leakage is considered to be UAW, however, individual water main breaks can be discounted on a case-by-case basis. Any adjustment in the calculation of UAW made as a result of confidently estimated uses shall be documented as required in the ASR.

### **I. UAW Compliance Plan Requirement**

If the Town of Scituate fails to document compliance with the UAW performance standard in its 2009 ASR, or in any year's ASR thereafter, then Scituate must file with that ASR a UAW Compliance Plan (UAW Plan) which shall:

1. meet the requirements set forth below in Section II;
2. include measures to be implemented to meet the performance standard, and
3. include the schedule for implementing such measures.

The filing of a UAW plan shall not constitute a return to compliance, nor shall it affect the Department's authority to take action in response to Scituate's failure to meet the performance standard.

If a UAW plan is required, Scituate must:

1. submit information and supporting documentation sufficient to demonstrate compliance with its UAW plan annually at the time it files its ASR, and
2. continue to implement the UAW plan until it complies with the performance standard and such compliance is documented in Scituate's ASR for the calendar year in which the standard is met.

### **II. Contents of an UAW Compliance Plan**

The Town of Scituate has the choice to file a UAW plan with measures tailored to the specific needs of its water supply system (Individualized UAW plan) or a UAW plan that includes Best Management Practices (BMP UAW plan).

At a minimum, all UAW plans must include a detailed:

1. description of the actions taken during the prior calendar year to meet the applicable performance standard;
2. analysis of the cause of the failure to meet the performance standard;
3. description and schedule of the actions that will be taken to meet the performance standard, and
4. analysis of how the actions described in c. will address the specific circumstances that resulted in the failure to meet the performance standard.

UAW plans may be amended to revise the actions that will be taken to meet the performance standard. Amended UAW plans must include the information set forth in the paragraph above.

#### Individualized UAW Compliance Plan

Without limitation, individualized UAW compliance plans for failure to meet the UAW performance standard may include any of the actions set forth in the BMP UAW compliance plan below.

#### BMP UAW Compliance Plan

At a minimum, all BMP UAW plans for failure to meet the UAW performance standard must include all of the following actions:

1. within one year of filing the UAW plan, complete a water audit and leak detection survey of the entire system and submit completed audit and survey to the Department;
2. within one year of completing the audit and leak detection survey, conduct sufficient repairs to reduce by 75% (by water volume) all leaks detected in the survey; and within one year of completing such repairs, conduct additional repairs of leaks detected in the survey as may be necessary to reduce Scituate's UAW to 10% or less;
3. implementation of a program that ensures the inspection and evaluation of all water meters and, as appropriate, the repair, replacement and calibration of water meters in accordance with the following schedule:
  - Large Meters (2" or greater) - within one year of filing the BMP UAW plan
  - Medium Meters (1" or greater and less than 2") - within two years of filing the BMP UAW plan
  - Small Meters (less than 1") – within two years of filing the BMP UAW Plan;
4. implementation of monthly or quarterly billing within three years of filing the BMP UAW Plan, and
5. within one year of filing the UAW Plan, implementation of a water pricing structure that achieves sufficient revenues to pay the full cost of operating the system including, without limitation, the costs of repairs under paragraph a., the costs of meter repairs, replacements and calibrations under paragraph b., the costs of employees and equipment, and ongoing maintenance and capital costs.